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(71) Applicant
Baejin Corporation

(Incorporated in the Republic of Korea)

1671-5 Seocho-dong, Seocho-ku, Seoul,
Republic of Korea

(72) Inventor
Dong Soo Ju

(74) Agent and/or Address for Service
Marks & Clerk
57-60 Lincoln's Inn Fields, London, WC2A 3LS,
United Kingdom

(54) A fly coupled tent

(57) A fly-coupled tent comprises a dome shaped fly 8 formed from a plurality of triangular water-proof fabric patches provided with holders 10 on the outside thereof for inserting supporting poles 11. The inside of the fly 8 is provided with a plurality of rings 12, the rings 12 being attached to the fly 8 by bands. Within the fly 8, there is accommodated a tent cloth 16, smaller than fly 8, and coupled with fly 8 by a plurality of bar type connecting devices 17 attached to the tent cloth 16 by means of bands 18. Thus the fly 8 is supported by the supporting poles 11, and the tent cloth 16 is suspended from the fly 8 within the fly 8. The fly coupled tent can be installed in a simple manner by "one touch" by any one, and can be folded up into a compact size for carrying.

Fig 3

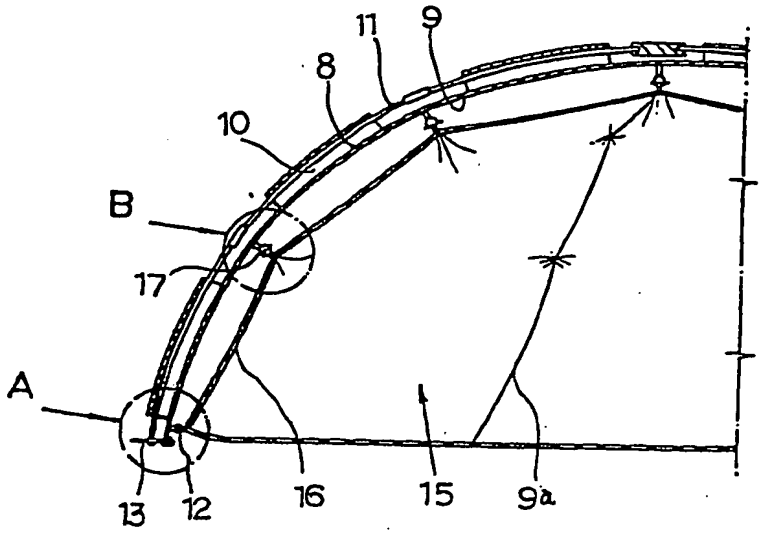

Fig 7

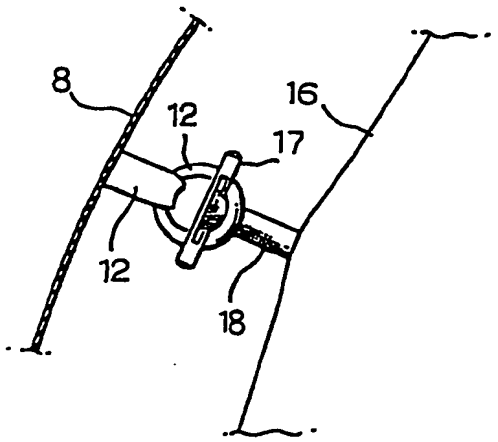

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Fig. 1

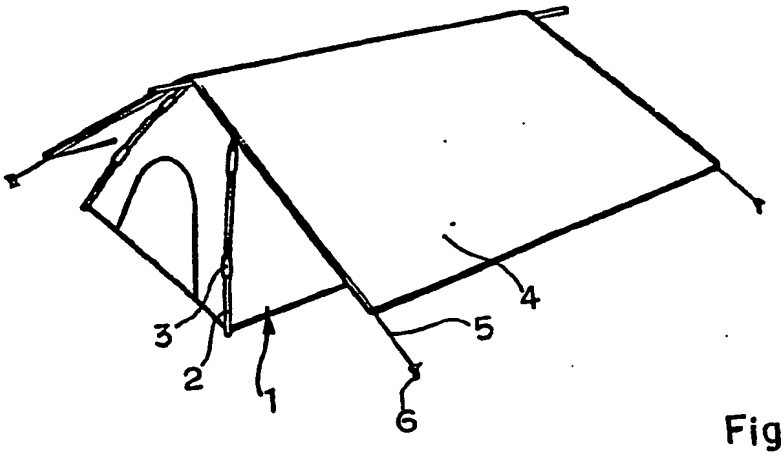


Fig 2

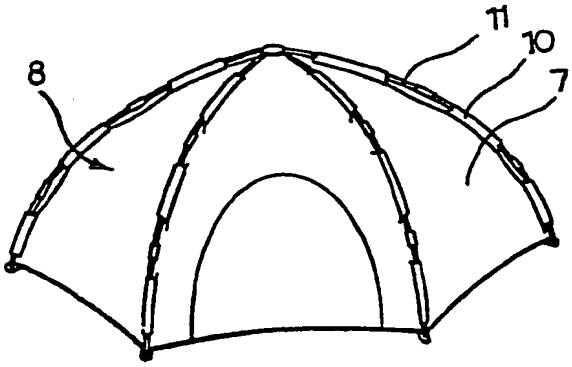


Fig 3

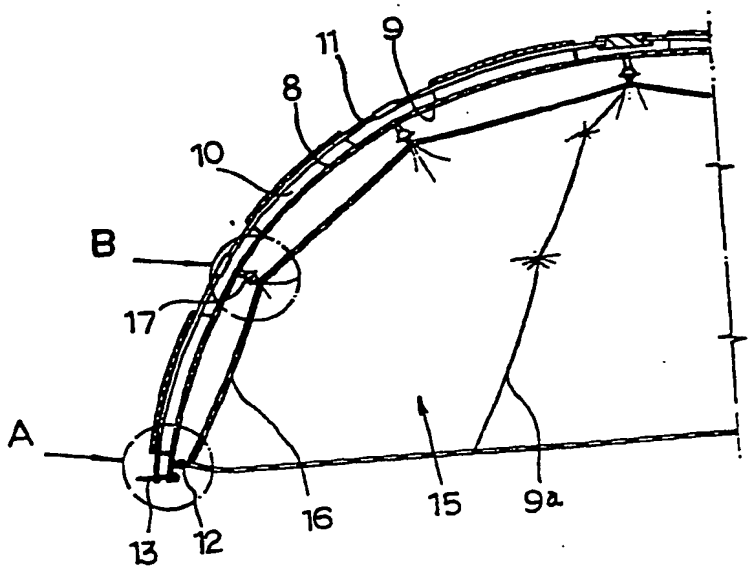


Fig 4

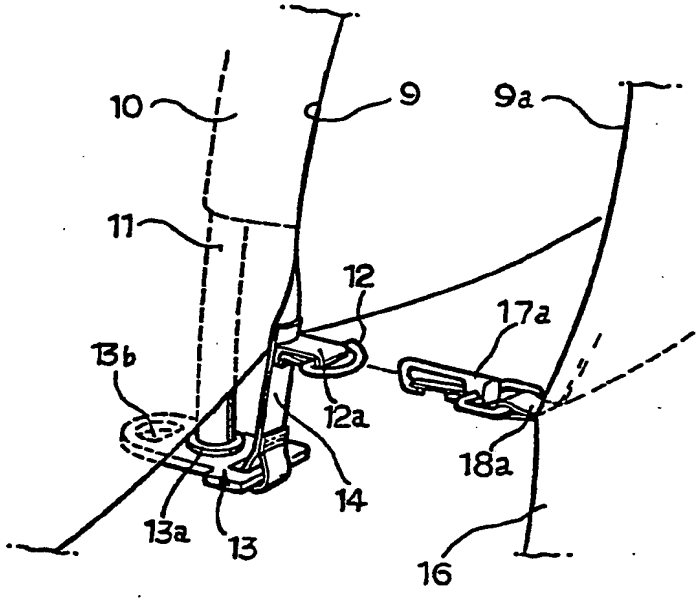


Fig 5

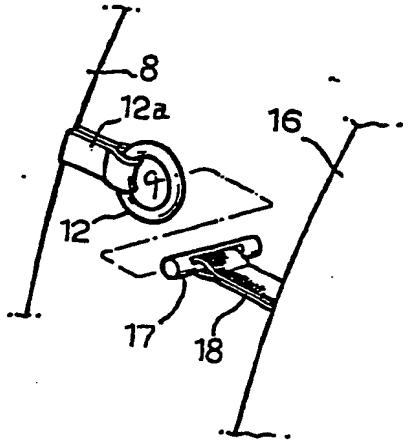


Fig 6

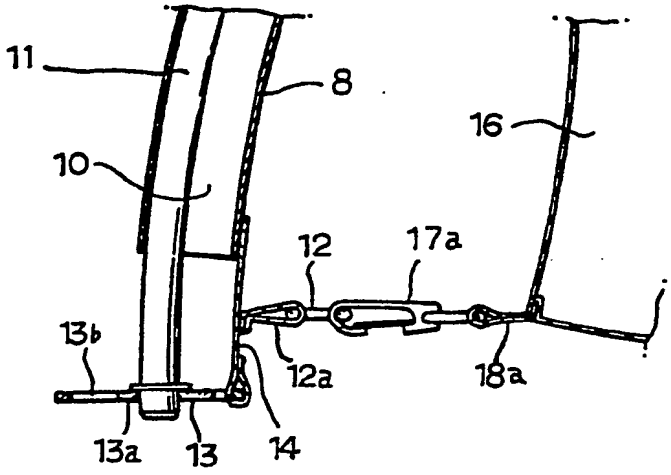
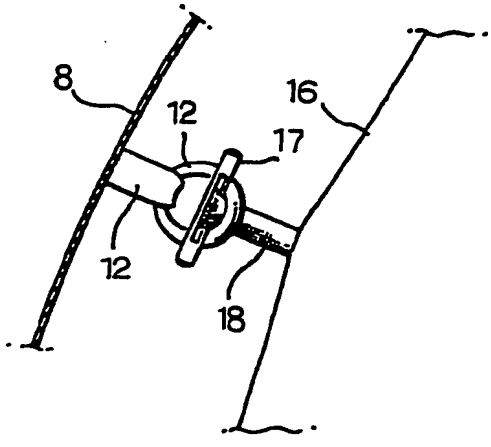


Fig 7



FLY COUPLED TENT

The present invention relates to a fly-coupled tent in which a fly can be installed on a supporting pole or a supporting frame to form in a simple manner a dual layered tent. Particularly, the present invention relates to a fly-coupled tent in which a dome shaped fly made of a water-proof fabric is coupled with a smaller dome shaped tent cloth by connecting a plurality of circular rings, formed on the inner surface of the fly, to a plurality of bar type connecting devices, provided on the outside surface of the tent cloth, and supporting poles or frames (like that of an umbrella) of the tent are fitted to holders which are provided on the outside surface of the fly, thereby making it possible to install the tent in a simple manner by "one touch".

Conventionally, there are various kinds of tents, and, in most of them, a fly of a water-proof fabric covers the tent in order to shield rain or sunshine. For example, as shown in Figure 1, in the case where a conventional A-shaped tent is to be erected, first the tent 1 is erected by manipulating supporting poles 2 and tent holders 3, thereby constructing a three-dimensional

space. Then a rectangular fly 4 is mounted upon the erected tent, so that the fly 4 is hung on the tent to form an inverse V shape. Then supporting strings 5 which are connected to the four corners of the fly 4 are connected to pins 6 which are driven into the ground, thereby completing the erection of the tent.

When the tent is to be taken down, a process reverse to that of the erection of the tent is carried out. That is, the fly is first removed, and then, the tent is folded up. Therefore, both in putting up and taking down a conventional tent, much effort is required. In the case of a dome shaped tent, even more effort is required than in the case of an A shaped tent, which makes such tents very troublesome to use.

Recently, in order to overcome the above described problems, the so-called "one touch" type tent has been developed in which the tent cloth, the supporting frames and the poles are joined together. For tents of this type, the dome shaped tent is more advantageous to apply than the A shaped tent. However, a tent on its own is not enough to shield rain and sunshine, and therefore, a fly is additionally installed to the outside of the tent. A fly which can be installed by "one touch" has not been developed before.

The present invention is intended to overcome the above described disadvantages of the conventional techniques.

Therefore, it is the object of the present invention to provide a fly coupled tent in which a tent and a fly are coupled together by supporting the fly by means of supporting poles or frames, in such a manner that the tent and the fly can be installed by "one touch".

According to the present invention there is provided a fly coupled tent comprising: a dome shaped fly having a plurality of triangular portions, a tent cloth, smaller than the fly, for coupling with the fly; a plurality of holders formed on the outer surface of fly and a plurality of supporting poles for inserting into the holders; wherein connecting means are provided on the inner surface of the fly and the outer surface of the tent cloth so that, in use, the connecting means couples together the fly and the tent cloth leaving a space between them.

Preferably the connecting means comprises a plurality of rings attached at intervals along sewing tracks on the inside of the ply or outside of the tent and a plurality of corresponding bar type connecting devices attached at intervals along sewing tracks of the other of the inside of the fly or the outside of the tent such that, in use,

each of the bar type connecting devices connect with the corresponding ring to couple together the fly and the tent cloth with a space between them.

Thus the fly and the tent are coupled together with a space provided between them, and when the poles or supporting frames are unfolded the fly coupled tent can be easily erected on the ground, thereby forming a convenient tent which overcomes the conventional disadvantages.

Further features and advantages of the present invention will become more apparent from the following detailed description of the preferred embodiment of the present invention with reference to the attached drawings, in which:

Fig. 1 illustrates a conventional A shaped tent;

Fig. 2 is a perspective view showing an erected fly-coupled tent according to the present invention;

Fig. 3 is a longitudinal sectional view of a part of a tent according to the present invention;

Fig. 4 is an enlarged perspective view of the portion A of Fig. 3;

Fig. 5 is an enlarged perspective view of the portion B of Fig. 3;

Fig. 6 illustrates the connected state of the portion A of Fig. 4; and

Fig. 7 is a perspective view showing the connected state of the portion B of Fig. 5.

A plurality of triangular water-proof fabric patches 7 are sewn together to form a dome shaped fly 8, and holders 10 are formed along the sewing tracks 9 of the triangular patches 7 on the outside of the fly 8 in order to insert poles 11 in a curved and radiative form.

A plurality of rings 12 are attached on the inside of the fly 8 and on the sewing tracks 9 by means of bands 12a. At the lower end of the pole 11, there is fitted a securing plate 13 on which a pole inserted hole 13a and a pin (not shown) inserting hole 13b are formed, and to which one of the bands 12a of the rings 12 are connected by means of a band 14.

Inside the fly 8, there is installed a tent cloth 16 which is smaller than the fly 8, and which is formed by sewing together a plurality of triangular fabric patches 15. On the outside of the tent cloth 16, there are attached a plurality of bar shaped connecting devices 17 at intervals along sewing tracks 9a by means of bands 18, positioned to correspond with the rings 12 of the fly 8. These bar shaped connecting devices 17 are connected to the rings 12 of the fly 8, in such a manner that the connecting devices 17 are cross-engaged with

the rings 12 as shown in Fig. 7.

Near the lower edges of the tent cloth 16, there are attached safety hooks 17a by means of bands 18a, so that the safety hooks 17a can be lockably connected to the lowermost rings of the fly 8.

Erection of the fly coupled tent of the present invention constituted as above will now be described.

Generally, "one touch" type tents are arranged such that the upper tips of the supporting poles 11 are connected together like an umbrella, and the supporting poles 11 acurately extend in a radiating form.

Therefore, the fly coupled tent of the present invention can be folded up with the poles 11, the fly 8 and the tent cloth 16 assembled together in order to store or carry it. When the fly coupled tent is to be erectedin an open field or the like, the fly, the tent cloth and the poles 11 are unfolded into a dome shape as shown in Fig. 2, and then, the lower ends of the poles 11 are inserted into the holes 13a of the securing plate 13 as shown in Figs. 3 and 6, so that the fly 8 and the tent cloth 16 form a large dome shaped space within it. That is, the completely unfolded fly 8 and the poles 11 are coupled together by the holders 10 to form a spatial

structure.

Further, the tent cloth 16 and the fly 8 are also coupled together by hooking the connecting devices 17 to the rings 12, with the tent cloth 16 completely unfolded. Therefore, users of the tent can go in and out of the tent through the entrance of the tent without requiring a separate supporting device.

Meanwhile, air can properly ventilate through the space formed between the fly 8 and the tent cloth 16. Therefore, the fly 8 primarily shields sun beams, and secondly, conduction of heat into the interior of the tent can be prevented owing to the air ventilating through the space between the fly 8 and the tent cloth 16. Furthermore, during rainfall, the fly 8 blocks rain drops, so that the interior of the tent is better protected from the rain.

If the tent is to be more firmly fixed on the ground, securing pins are driven through the other holes 13b of the securing plates 13, which are fitted to the lower ends of the poles 11, into the ground, so that the tent is strongly secured to the ground.

In the case where each of the poles 11 consists of a number of segments, the poles 11 are taken out from the

holders 10 of the fly 8, and the fly 8 and the tent cloth 16 are folded up together, when carrying it or storing it.

When the tent is erected on the grounds of an open field, first the detached segments of the poles 11 are assembled together to the required length, and then, the assembled poles 11 are inserted into the holders 10 of the fly 8, while the upper tips of the inserted poles 11 are coupled together as shown in Fig. 2.

Meanwhile, in the case of a "one touch" type tent, the poles 11 are unfolded like an umbrella, and the unfolded tent is put on the ground. Then the lower ends of the poles 11 are inserted into the holes 13a of the securing plates 13, and pins are driven through the holes 13b of the securing plate 13 into the ground as shown in Figs. 3 and 6, thereby completing the erection of a three-dimensional dome shaped tent. In this way the fly 8 and the tent cloth 16 form two layers coupled together with a space between them, allowing ventilation of air and shielding from rain and sunshine.

The fly 8 and the tent cloth 16 do not have to be disconnected from each other except when they are washed. However, the fly 8 can be detached from the tent cloth 16 so that it can be used as a single layer

tent.

According to the present invention as described above, holders are formed along the sewing tracks of the fly and on the outside of the fly, and poles are inserted into the holders. Further, rings are attached along the sewing tracks and on the inside of the fly by means of bands, and connecting devices are attached along the sewing tracks of the tent cloth and on the outside of the tent cloth by means of bands. Thus the fly and the tent cloth are coupled together by connecting the rings of the fly to the connecting devices of the tent cloth. This fly coupled tent can be installed on the ground by unfolding it by "one touch" in a simple manner. Thus the tent of the present invention is unfolded and erected easily, and can be easily folded up and carried.

CLAIMS:

1. A fly coupled tent comprising: a dome shaped fly; a tent cloth, smaller than the fly, for coupling with the fly; a plurality of holders formed on the outer surface of fly and a plurality of supporting poles for inserting into the holders; wherein connecting means are provided on the inner surface of the fly and the outer surface of the tent cloth so that, in use, the connecting means couples together the fly and the tent cloth leaving a space between them.

2. A fly coupled tent as claimed in claim 1 wherein the connecting means comprises a plurality of rings attached at intervals along sewing tracks on one of the inside of the fly and the outside of the tent and a plurality of corresponding bar type connecting devices attached at intervals along sewing tracks of the other of the inside of the fly and the outside of the tent, such that, in use, each of the bar type connecting devices connect with the corresponding ring to couple together the fly and the tent cloth with a space between them.

3. A fly coupled tent as claimed in claim 2, wherein said rings of said fly are connected to said bar type connecting devices of said tent cloth so that said fly

and said tent cloth form dual cover layers of the tent.

4. A fly coupled tent as claimed in claim 2, wherein said fly is supported by said supporting poles, said poles being inserted into said holders of said fly, and said tent cloth is accommodated within said fly, said tent cloth being coupled to said fly through said rings and said bar type connecting devices, thereby forming a space between said fly and said tent cloth.

5. A fly coupled tent as claimed in any one of the preceding claims, the tent further comprising securing plates for fitting to the lower ends of the supporting poles, the securing plates having insertion holes for receiving, in use, the lower end of the plates.

6. A fly coupled tent as claimed in claim 5, wherein the securing plates and the tent cloth have connecting means which, in use, couple the securing plates with the tent cloth.

7. A fly coupled tent comprising: a dome shaped fly having a plurality of triangular patches made of waterproof fabric; a plurality of holders formed along sewing tracks of said fly and on the outside of said fly; a plurality of supporting poles for insertion into said holders; a plurality of rings attached along said

sewing tracks at certain intervals and on the inside of said fly by means of bands; securing plates having insertion holes for being fitted to the lower ends of said supporting poles, said securing plates further connected to bands; a tent cloth having a smaller size than that of said fly and for being coupled with said fly; a plurality of bar type connecting devices attached along sewing tracks of said tent cloth and on the outside of said tent cloth correspondingly with said rings of said fly by means of bands, said connecting devices of said tent cloth being connected to said rings of said fly so as for said fly and said tent cloth to be coupled together with a certain space formed between them; and bands and hooks connected to the lowermost rings of said fly, whereby said fly and said tent cloth together with said supporting poles form a fly coupled tent.

8. A fly coupled tent substantially as hereinbefore described with reference to, and as illustrated in, Figs. 2 to 7 fo the accompanying drawings.

Amendments to the claims
have been filed as follows

1. A fly coupled tent comprising: a dome shaped fly; a tent cloth, smaller than the fly, for coupling with the fly; a plurality of holders formed on the outer surface of the fly and a plurality of supporting poles for inserting into the holders, wherein detatchable connecting means are provided on the inner surface of the fly and the outer surface of the tent cloth, so that the fly and the tent cloth can be detatched by uncoupling the connecting means, such that, in use, the connecting means couples the fly and the tent cloth leaving a space between them.

2. A fly coupled tent as claimed in claim 1 wherein the connecting means comprises a plurality of rings attached at intervals along sewing tracks on one of the inside of the fly and the outside of the tent and a plurality of corresponding bar type connecting devices attached at intervals along sewing tracks of the other of the inside of the fly and the outside of the tent, such that, in use, each of the bar type connecting devices connect with the corresponding ring to couple together the fly and the tent cloth with a space between them.

3. A fly coupled tent as claimed in claim 2, wherein said rings of said fly are connected to said bar type connecting devices of said tent cloth so that said fly

and said tent cloth form dual cover layers of the tent.

4. A fly coupled tent as claimed in claim 2, wherein said fly is supported by said supporting poles, said poles being inserted into said holders of said fly, and said tent cloth is accommodated within said fly, said tent cloth being coupled to said fly through said rings and said bar type connecting devices, thereby forming a space between said fly and said tent cloth.

5. A fly coupled tent as claimed in any one of the preceding claims, the tent further comprising securing plates for fitting to the lower ends of the supporting poles, the securing plates having insertion holes for receiving, in use, the lower end of the plates.

6. A fly coupled tent as claimed in claim 5, wherein the securing plates and the tent cloth have connecting means which, in use, couple the securing plates with the tent cloth.

7. A fly coupled tent comprising: a dome shaped fly having a plurality of triangular patches made of waterproof fabric; a plurality of holders formed along sewing tracks of said fly and on the outside of said fly; a plurality of supporting poles for insertion into said holders; a plurality of rings attached along said

sewing tracks at certain intervals and on the inside of said fly by means of bands; securing plates having insertion holes for being fitted to the lower ends of said supporting poles, said securing plates further connected to bands; a tent cloth having a smaller size than that of said fly and for being coupled with said fly; a plurality of bar type connecting devices attached along sewing tracks of said tent cloth and on the outside of said tent cloth correspondingly with said rings of said fly by means of bands, said connecting devices of said tent cloth being connected to said rings of said fly so as for said fly and said tent cloth to be coupled together with a certain space formed between them; and bands and hooks connected to the lowermost rings of said fly, whereby said fly and said tent cloth together with said supporting poles form a fly coupled tent.

8. A fly coupled tent substantially as hereinbefore described with reference to, and as illustrated in, Figs. 2 to 7 fo the accompanying drawings.

Patents Act 1977
Examiner's report to the Comptroller under Section 17 (The Search Report)

Application number
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Relevant Technical fields

(i) UK Cl (Edition K) E1D DGS DF/9/ DF158 DF 185

(ii) Int Cl (Edition 5) E04H

Search Examiner
J D CANTRELL

Databases (see over)

(i) UK Patent Office

(ii)

Date of Search
5 OCTOBER 1992

Documents considered relevant following a search in respect of claims 1-8

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	US 4269210 (MARKS)	1,5
X	US 4165757 (MARKS)	1,5

Category	Identity of document and relevant passages	Relevant to claim(s)

Categories of documents

X: Document indicating lack of novelty or of inventive step.

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